

**LPDES PERMIT NO. LA0063860 (Agency Interest No. 11153)**

**LPDES STATEMENT OF BASIS  
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

- I. Company/Facility Name:** Air Products and Chemicals, Inc.  
Plaquemine Hydrogen Purification  
36637 Louisiana Highway 30  
Geismar, Louisiana 70734
- II. Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Water Permits Division  
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**Date Prepared:** July 29, 2009

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

**IV. Permit Action/Status:**

**A. Reason for Permit Action:**

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2365/40 CFR 122.46.

In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes

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only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

- B. LPDES permit: Permit Effective Date – August 1, 2003  
Permit Expiration Date – July 31, 2008
- C. Application submittal date: Application submitted on July 28, 2008, application addendum submitted January 28, 2009.

**V. Facility Information:**

- A. Location – 9555 Louisiana Highway 1 South, Addis, West Baton Rouge Parish (Latitude 30°19'29", Longitude 91°15'10").

- B. Applicant Activity -

According to the application, Air Products and Chemicals, Inc.'s Plaquemine Hydrogen Purification facility is an industrial gas manufacturer that produces and provides gaseous hydrogen for supply to various customers via pipeline. The facility receives crude hydrogen feedstock, removes any impurities, and raises the pressure through the use of a multistage compressor/catalyst/absorbent process.

- C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline Applicability

Effluent guidelines promulgated at 40 CFR 415 include two subparts relevant to the production of hydrogen – Subpart AG and Subpart AO. Subpart AG is not applicable to Air Products Plaquemine because the facility does not produce hydrogen by the reforming process. Subpart AO is not applicable to the facility since it does not produce hydrogen as a refinery by-product. Therefore technology limitations in the draft permit are based upon best professional judgment (BPJ) and current office practices.

- D. Fee Rate -

1. Fee Rating Facility Type: Minor
2. Complexity Type: II (BPJ – The complexity has been reduced to a II since plant operations are more similar to oxygen and nitrogen gas production because the plant product does not require packaging or finishing.)
3. Wastewater Type: II

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4. SIC code: 2813

**VI. Receiving Waters:** Mississippi River via the Dow Chemical Canal Return System and Dow Chemical's Outfall 001

A. River Basin: Mississippi River Basin, Segment No.: 070301

B. Designated Uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation and drinking water supply

**VII. Outfall Information:**Outfall 001

- A. Type of wastewater – The continuous discharge of process area storm water runoff, process condensate, floor and equipment pad washdown, cooling tower blowdown, laboratory wastewater, sulfuric acid tank storm water runoff, washdown water, safety shower test water, freeze protection water, and previously monitored wastewaters from Outfall 201
- B. Location – At the point of discharge from the hydrogen plant effluent sump, prior to entering the Dow Chemical discharge canal (Latitude 30°19'24", Longitude 91°15'04")
- C. Treatment – pH control, filtration, oil/water separator
- D. Flow – 0.015 MGD
- E. Receiving waters – Mississippi River via the Dow Chemical Canal Return
- F. Basin and segment – Mississippi River Basin, Segment 070301

Outfall 201

- A. Type of wastewater – The intermittent discharge of hydrostatic test wastewater
- B. Location – At the point of discharge from the vessel or pipeline being tested prior to combining with other waters
- C. Treatment – None

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- D. Flow – varies
- E. Receiving waters – To any Final Outfall, thence to the Mississippi River via the Dow Chemical Canal Return
- F. Basin and segment – Mississippi River Basin, Segment 070301

### **VIII. Proposed Permit Limits and Rationale:**

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit.

#### **A. PROPOSED CHANGES:**

1. Outfalls 001 - A monitoring frequency reduction for Oil & Grease (at Outfall 001) is proposed in the draft permit in accordance with the April, 1996, Interim Guidance for Performance-Based Reduction of NPDES Permit Monitoring Frequencies. The monitoring frequency has been reduced from 2/month to 1/quarter.
2. Outfall 001 - Phosphorus monitoring from the previous permit has been removed. This pollutant was added to the previous permit because at the time, phosphorus was a stream impairment listed on the 305(b) report. Since that time, the receiving waterbody segment (070301) has been delisted.
3. Outfall 001 and 01A – Outfall 01A has been removed from the permit since it has similar limitations as its final outfall (Final Outfall 001), and since the two are located very close to each other. Final Outfall 001 did not have limitations for TSS. Therefore, the proposed draft permit has moved the TSS limitations from Outfall 01A to Outfall 001.

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**B. PROPOSED EFFLUENT LIMITATIONS:**

**Outfall 001** – The continuous discharge of process area storm water runoff, process condensate, floor and equipment pad washdown, cooling tower blowdown, laboratory wastewater, sulfuric acid tank storm water runoff, washdown water, safety shower test water, freeze protection water, and previously monitored wastewaters from Outfall 201

Parameter	Proposed Permit Limitations		Monitoring Frequency
	Monthly Average mg/L	Daily Maximum mg/L	
Flow (MGD)	Report	Report	1/week
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	2/month
TOC	---	50	2/month
Oil & Grease	10	15	1/quarter
Total Residual Chlorine	---	1.0	2/month
TSS	30	45	1/month

**EFFLUENT LIMITATIONS BASIS for Outfall 001:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.1.1.b.

**TOC:** Limitations are based upon BPJ and the previous permit.

**Oil & Grease:** Limitations are based on the current permit and LDEQ's Stormwater Guidance [letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)].

**Total Residual Chlorine:** Limitations based upon the Light Commercial General Permit (LAG480000).

**TSS:** Limitations are based upon the limitations established at the previous permit's Outfall 01A.

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**pH:** Requirements are based upon LAC 33:IX.1113.C.1.

**Outfall 201** – The intermittent discharge of hydrostatic test wastewaters

Parameter(*1)	Proposed Permit Limitations		Monitoring Frequency
	Monthly Average mg/L	Daily Maximum mg/L	
Flow	Report	Report	1/discharge event
pH	6.0 s.u.(min)	9.0 s.u.(max)	1/discharge event
TSS	----	90 mg/L	1/discharge event
Oil & Grease	----	15 mg/L	1/discharge event
TOC	----	50 mg/L	1/discharge event
Benzene	----	50 µg/L	1/discharge event
Total BTEX	----	250 µg/L	1/discharge event
Total Lead	----	50 µg/L	1/discharge event

(\*1) Flow, TSS, Oil and Grease, and pH shall be measured on discharges from all new and existing pipelines, flowlines, vessels, or tanks. In addition, Total Organic Carbon (TOC) shall be measured on discharges from existing pipelines, flowlines, vessels, or tanks which have previously been in service; (i.e., those which are not new). Benzene, Total BTEX, and Total Lead shall be measured on discharges from existing pipelines, flowlines, vessels, or tanks which have been used for the storage or transportation of liquid or gaseous petroleum hydrocarbons.

**EFFLUENT LIMITATIONS BASIS for Outfall 201:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.1.1.b.

**pH, TSS, Oil & Grease, TOC, Benzene, Total BTEX and Total Lead:** Limitations based upon the current permit, BPJ and the LPDES Hydrostatic Test Waters General Permit (LAG670000).

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**C. MONITORING FREQUENCIES**

Monitoring frequencies for all parameters (with the exception of Oil & Grease and TSS) are based upon office practices for similar discharges and the previous permit.

As requested by the permittee, the monitoring frequency for Oil & Grease (at Outfall 001) has been reduced based upon the April, 1996, Interim Guidance for Performance-Based Reduction of NPDES Permit Monitoring Frequencies. This guidance was prepared in response to the President's Regulatory Reinvention Initiative to reduce the reporting and monitoring burden on the regulated community. These monitoring frequency reductions have been established in the draft permit because the permittee has demonstrated an ability to consistently reduce pollutants in the discharge below the levels necessary to meet existing permit requirements for the respective outfalls. Two years of data was reviewed and the composite average of this data was compared to the permit limit to determine the potential monitoring frequency reduction.

**IX. Compliance History/DMR Review:**

- A. Compliance History – There are no open enforcement actions against the facility as of July 29, 2009.
- B. DMR Review – There were no excursions reported between January 2007 and May 2009):
- C. Inspections – The last inspection of the facility (3/9/05) noted no violations.

**X. Endangered Species:**

The receiving waterbody for Air Products & Chemicals, Inc. is Subsegment 070301 of the Mississippi River Basin. The receiving waterbody, Subsegment 070301 of the Mississippi River Basin, is listed in Section II.2 of the Implementation Strategy as habitat for the Pallid Sturgeon, which is listed as a threatened or endangered species. This draft permit has been submitted to the FWS for review in accordance with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, LDEQ has made a preliminary determination that the issuance of the LPDES permit is not likely to have an adverse effect upon the Gulf Sturgeon. However, after consultation with the FWS, the LDEQ may choose to modify this permit based on information provided by the FWS. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

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**XI. Historic Sites:**

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

**XII. Tentative Determination:**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharges described in the application.

**XIII. Variances:**

No requests for variances have been received by this Office.

**XIV. Public Notices:**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

A public notice will be published in a local newspaper of general circulation and in the Office of Environmental Services Public Notice Mailing List.

**XV. TMDL Waterbodies:**

Air Products and Chemicals discharges utility wastewaters, washdown water, floor and equipment pad washdown, laboratory water, process condensate, stormwater runoff, maintenance waters and hydrostatic test waters to the Mississippi River (Segment 070301). Segment 070301 is not listed on LDEQ's Final 2006 303(d) List, as impaired, and to date no TMDLs have been established. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDLs.



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**XVI. Stormwater Pollution Prevention Plan (SWP3) Requirements:**

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. For first time permit issuance, the Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. For renewal permit issuance, the Part II condition requires that the Storm Water Pollution Prevention Plan (SWP3) be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].